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French et al.

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(54) **SYSTEM AND METHOD FOR TRACKING
AND ASSESSING MOVEMENT SKILLS IN
MULTIDIMENSIONAL SPACE**

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
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This patent is subject to a terminal dis-
claimer.

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Mar. 3, 1998, which is a continuation-in-part of application
No. 08/554,564, filed on Nov. 6, 1995, and a continuation-
in-part of application No. PCT/US96/17580, filed on Nov. 5,
1995, now abandoned, which is a continuation-in-part of
application No. 08/554,564.

(51) **Int. Cl.⁷** **A61B 5/22**

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(58) **Field of Search** 73/379.04; 273/437;
364/410; 128/782; 434/21

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(57) **ABSTRACT**

Accurate simulation of sport to quantify and train perfor-
mance constructs by employing sensing electronics for
determining, in essentially real time, the player's three
dimensional positional changes in three or more degrees of
freedom (three dimensions); and computer controlled sport
specific cuing that evokes or prompts sport specific
responses from the player that are measured to provide
meaningful indicia of performance. The sport specific cuing
is characterized as a virtual opponent that is responsive to,
and interactive with, the player in real time. The virtual
opponent continually delivers and/or responds to stimuli to
create realistic movement challenges for the player.

100 Claims, 26 Drawing Sheets

